

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 300580	<div style="display: flex; justify-content: space-between;"> FOR FURTHER ACTION See Form PCT/IPEA/416 </div>	
International application No. PCT/RU 2005/000151	International filing date (day/month/year) 30 March 2005 (30.03.2005)	Priority date (day/month/year) 30 March 2004 (30.03.2004)
International Patent Classification (IPC) or national classification and IPC <div style="text-align: right;">H01M 4/86 (2006.01) H01M 4/88 (2006.01)</div>		
Applicant ZAKRYTOE AKTSIONERNOE OBSCHESTVO "INDEPENDENT POWER TECHNOLOGIES" et al.		

1. This report is the international preliminary examination report, established by the International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of the report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
☐ Sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the opinion
☐ Box No. II Priority
☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐ Box No. IV Lack of unity of invention
☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐ Box No. VI Certain documents cited
☐ Box No. VII Certain defects in the international application
☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 06 October 2005 (06.10.2005)	Date of completion of this report 23 March 2006 (23.03.2006)
Name and mailing address of the IPEA/RU FIPS Russia, 123995, Moscow, G-59, GSP-5, Berezhkovskaya nab., 30-1 Facsimile No.	Authorized officer <div style="text-align: right;">V. Stanykov</div> Telephone No. 240-25-91

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/RU 2005000151

Box No. I Basis of the opinion

1. With regard to the **language**, this report is based on:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed.")*:

3.

- ☐ the international application as originally filed/furnished
- ☐ the description:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims. Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to the sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims. Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any tablet(s) related to the sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded".

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/RU 2005/000151

Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-5	YES
	Claims		NO
Inventive Step (IS)	Claims	1-5	YES
	Claims		NO
	Claims	1-5	YES
	Claim		NO

2. Citations and explanations:

Upon the Examination Report drawing up there were used the following sources of information:

D1 - RU 2183370 C1; D2 - RU 2170477 C1; D3 - US 2004/0048140 A1;
D4 - FR 2300425; D5 - GB 1085899.

In D1 there is known an electrode of an alkaline fuel cell, comprising an insulating frame with ports for feeding and discharging reagents, a mesh current collector, embedded in the frame with lead-outs, extending beyond the frame, an active and barrier layers, sequentially applied onto the mesh current collector.

The electrode, which has been declared in accordance with Claim 1, differs from the electrode, that is known from D1, in that sites of the embedment of the current collector and the lead-outs in the insulating frame and a periphery of the current collector along an inner edge of the insulating frame are provided with a sealing layer.

From D2 there is known a method for producing an electrode of an alkaline fuel cell, comprising the steps of: producing a mesh current collector with lead-outs, sequentially applying an active and barrier layers onto the current collector, embedding the current collector with the lead-outs into an insulating frame.

The method, which has been declared in accordance with the independent Claim 4, differs from the method, that is known from D2, in that before the application of the active and barrier layers onto the current collector, edges of the current collector and the lead-outs in sites of the embedment into the insulating frame are impregnated with a lacquer solution, but after the collector has been embedded into the insulating frame, a periphery of the collector along an inner edge of the insulating frame is impregnated with the lacquer solution.

The mentioned distinctive features, which are intended for an improvement of the electrode operation reliability by means of disjoining action of an electrolyte upon the insulating frame of the electrode and by means of preventing a leakage of the electrolyte, are not disclosed in the prior art and are not obvious ones for a person with the ordinary skills in the art.

Thus, Claims 1 and 4 as well as Claims 2, 3 and Claim 5, which respectively are dependent on them, meet the criteria of novelty and inventive step.

All the Claims 1 to 5 meet the criterion of industrial applicability.